

REMARKS

This Amendment is in response to the Office Action dated January 25, 2006. Claims 1-18 were withdrawn. Claims 19-44 are pending, but stand rejected. Claims 19-21, 23, 24, 26, 27, 29-32, 34, 35, 38, 42, and 45 have been amended. No new matter is believed to have been added.

Examination and reconsideration based on these amendments and the following remarks are respectfully requested.

Claim Objections

The Examiner objected to Claims 19-29 because the preambles are drawn to a secondary backing while the body of the claims includes a carpet comprising the secondary backing. Applicant notes that the carpet is not an explicitly claimed limitation, but part of the environment in which the secondary backing is used. To resolve this objection, however, the preamble of claim 19 has been amended to read “a reinforced secondary backing for use in forming a laminate carpet.” Applicant believes that this amendment overcomes the Examiner’s claim objections.

Claim Rejections - 35 U.S.C. § 102

Claims 30, 32, 33, 35, and 37-40 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,484,639 to Woodall *et al.* Applicant respectfully traverses these anticipation rejections and has amended the pending independent claims to expedite allowance.

The Examiner stated that Woodall discloses a secondary backing for carpets having “additional” yarns of a different color woven into said backing in the warp direction. Applicant respectfully submits that Woodall does not disclose or teach “additional” yarns; instead, there is the same number and types of yarns, but some have a different color from others. A secondary fabric with a conventional, uniform structure but having different color yarns cannot anticipate or render obvious the claimed invention.

More specifically, the Woodall secondary backing has a uniform fabric pattern or arrangement, which is unaffected by some of the yarns being a different color than other yarns. As the Woodall specification explains:

As shown in this most preferred embodiment, each of the 3 yarns 27, 29 and 31 is woven in the backing so as to have 6 yarns between them. This places the 3 yarns slightly less than about 1 inch apart in the carpet backing.

At least one of the three colored yarns has a color which is recognizably distinct from the other two colored yarns. Most preferably, two of the yarns are the same color with the third being different. In this case, the third yarn with the different color is required to be either yarn 27 or 31, that is not the middle yarn 29.....

Preferably, the colored yarns are the same type of yarn used in the rest of the secondary backing material.... Most preferably, the yarn 31 is blue and the yarns 27 and 29 are black.

Woodall, c. 3, l. 48-c. 4, l. 5. This uniform secondary backing pattern is also appreciated by considering Woodall's Figures 4-8, which shows all the Woodall fabrics having a uniformly repeating arrangement. Importantly, all the Woodall yarns that extend in the warp direction are substantially evenly spaced.

Unlike Woodall, the claimed secondary backing has two components: (i) a woven fabric having substantially evenly spaced yarns in the warp direction and (ii) additional reinforcing yarns, which are interconnected to the woven fabric. Figure 1 of the present application shows the woven fabric—a prior art design. It has a fabric arrangement with substantially evenly spaced yarns in the warp direction, just as Woodall disclosed.

Figure 2 of the Specification, in comparison, shows that same woven fabric, but now with the interconnected additional reinforcing yarns (reference numeral “42”). Figure 2 thus depicts one embodiment of the claimed invention, having both the substantially uniformly spaced woven fabric of Figure 1 and also the additional reinforcing yarns interconnected with that woven fabric.

In contrast, the prior art secondary backings lack this second claimed component, the additional reinforcing yarns. The Woodall backing uses only the first claimed component, “(i) the woven fabric”—albeit with some yarns having different colors. Woodall does not teach or

disclose the additional reinforcing yarns interconnected to that woven fabric. The present invention, accordingly, is patentably distinct over Woodall.

To make the distinction over the prior art clearer and to expedite allowance, applicant has amended the pending independent claims. The secondary backing limitation in claims 19, 30, and 38 now set forth in part:

- 19. a. a woven fabric having opposed longitudinal edges extending in the warp direction that define a width therebetween, the woven fabric having substantially evenly spaced yarns in the warp direction; and
 - b. a plurality of reinforcing yarns interconnected with the woven fabric and extending substantially in the warp direction
30. c. a secondary backing comprising:
- (i) a woven fabric having a plurality of substantially parallel and substantially evenly spaced warp extending yarns intermeshed with a plurality of weft extending yarns, the woven fabric having opposed longitudinal edges extending in the warp direction that define a width therebetween; and
 - (ii) a plurality of reinforcing yarns ~~interconnect~~ interconnected with the woven fabric and extending substantially in the warp direction.
38. b. providing a reinforced secondary backing, the secondary backing comprising a woven fabric having a plurality of substantially parallel and substantially evenly spaced warp extending yarns intermeshed with a plurality of weft extending yarns and a plurality of reinforcing yarns interconnected with the woven fabric and extending substantially in the warp direction.

Support for these amendments can be found throughout the Specification, including at page 11, lines 7-27, page 12, lines 5-11, page 15, lines 1-7, and Figures 1-2.

Returning to the Examiner's anticipation rejections, she stated that Woodall teaches all of the claimed limitations with the exception that the additional colored warp yarns are reinforcing yarns. The Examiner continued:

However, it is argued that Woodall anticipates the claims since "reinforcing" is merely descriptive of the function of said yarns and does not limit the yarns in any structural sense other than to limit the fabric to having additional warp yarns interwoven into the fabric.

Applicant respectfully disagrees with the Examiner's conclusion, particularly in view of the amended claims.

The "reinforcing yarn" is a separate, additional component that is neither present nor suggested in Woodall. The amended claims make clear that the structure of the claimed secondary backing is different from the prior art, as it includes additional reinforcing yarns. Woodall and the other references only disclose woven secondary backings that have substantially evenly spaced yarns in the warp direction, without any reinforcing yarns.

In fact, the Examiner later noted that "Woodall exemplifies a leno weave secondary backing comprising 8 ends/in by 5 picks/in," which she found to be interchangeable with a 16x5 leno weave. Office Action, p. 4, ¶ 7. These leno fabrics are some of the woven secondary backings with substantially evenly spaced warp yarns into which the claimed reinforcing yarns may be interconnected. Leno weaves, however, do not anticipate the claimed invention.

Coincidentally, applicant conducted comparative testing using the prior art 16x5 leno weave, both with and without the additional reinforcing yarns. The Specification explains:

To that end, comparative testing has been conducted evaluating carpets 10 manufactured using the secondary backing 40 of the present invention to similarly manufactured and constructed carpets C that did not employ the reinforcing yarns 42....

As to the secondary backing fabric 32, *both carpets used a 16x5 mesh (warp extending yarns leno weaved and having about 16 ends/inch and the weft yarns having about 5 pics/inch)*. The warp extending yarns 34 of the fabric were tape yarns and the weft extending yarns 36 were staple yarns, all of which were formed of polypropylene. This secondary backing is sold under the tradename BetterBack® designated as Style number 1003634. Of note, the secondary backings 30, 40 were mechanically "brushed" to increase its bonding strength.

The carpet 10 that included the reinforced yarns 42 used staple yarns formed of polypropylene interwoven into the secondary backing 32. There were two (2) reinforcing yarns evenly spaced per inch....

Specification, p. 19, ll. 10-32 (emphasis added). The Examiner's statement coupled with this disclosure in the Specification make clear that Woodall uses what is referred to in the claims as a

“woven fabric” having substantially evenly spaced warp yarns. Woodall is completely missing the additional “reinforcing yarns” that are part of the claimed secondary backing.

Notably, applicant even contemplated that these additional reinforcing yarns could be used to achieve the same benefits as Woodall teaches, despite Woodall using a different fabric design or structure. To this end, applicant’s Specification notes:

Additionally, the reinforcing yarns 42 may be colored, if desired. Such coloration of the reinforcing yarns may serve as carpet pattern guide as disclosed in U.S. Patent No. 5,484,639, which is incorporated herein by reference in its entirety. The coloration of the reinforcing yarns 42 may also be used for marketing purposes.

Specification, p. 18, ll. 1-4. Thus, the present invention is different from Woodall by having the additional reinforcing yarns, yet these reinforcing yarns may be colored to achieve the same benefits that Woodall teaches in the context of a secondary backing that has substantially evenly spaced warp extending yarns.

For these reasons, applicant respectfully submits that the claimed invention is allowable over Woodall. Applicant respectfully requests the Examiner to withdraw the anticipation rejections of claims 30, 32, 33, 35, and 37-40.

Claim Rejections - 35 U.S.C. § 103

The Examiner also determined that pending claims 19-28, 31, 34, 36, 43, and 44 are obvious over the prior art, namely, Woodall alone or combined with another reference. Based on the discussion above, applicant respectfully submits that Woodall neither anticipates nor renders obvious the claimed invention. In addition, dependent claims 31, 34, 36, 43, and 44 are allowable as they depend from allowable independent claims.

Addressing the specific rejections, the Examiner determined that claim 31 is obvious in view of Woodall. Now that the additional reinforcing yarns are more distinctly set forth in the pending claims, applicant respectfully submits that it is clearer that claim 31 is patentable over Woodall.

Claims 34 and 44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Woodall in view of U.S. Patent No. 6,060,145 issued to Smith *et al.* The Examiner explained that the 8x5 and 16x5 leno weaves can be interchanged with each other. Applicant agrees with this analysis; however, these two fabrics are both woven secondary backings with substantially evenly spaced warp yarns that do not render obvious the claimed invention. Again, the cited references in no way suggest using additional reinforcing yarns interconnected with these prior art woven secondary backings having substantially uniformly spaced warp yarns.

Claims 19-29, 36, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodall in view of U.S. Patent No. 4,406,310 issued to Reader *et al.* Neither reference teaches nor suggests using the additional reinforcing yarns. Both Woodall and Reader disclose woven secondary fabrics with substantially uniformly spaced warp yarns. *See, e.g.,* Figure 3 in Reader (showing secondary backing with uniform yarn arrangement). These references, accordingly, cannot render obvious the pending claims, as they are devoid of any teaching or suggestion to use additional reinforcing yarns interconnected with the disclosed secondary fabrics.

Addressing claims 19-29 separately, these claims include a functional limitation setting forth comparative delamination strength. It reads:

wherein, when the reinforced secondary backing is adhesively bonded to a tufted primary backing to form a laminate carpet, *the resulting carpet has a delamination strength at least twenty percent greater than a similarly formed carpet constructed using the woven fabric without the reinforcing yarns interwoven therein.* (Emphasis added.)

Section 2173.05(g) of the MPEP explains that “[a] functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.”

Applicant respectfully submits that the Examiner has not fully evaluated and considered this functional limitation as the MPEP requires. The Examiner addressed this limitation by noting that “it is argued that the limitation of an increase in delamination strength would be met since the structural limitations of the claim are met.” Office Action, p. 5, ¶ 8. Applicant believes

that this conclusion is mistaken for two reasons. First, as discussed above, the structural limitations of the claim are not met, as no cited prior art reference teaches the use of additional reinforcing yarns.

Second, the Specification includes testing results that compare two 16x5 leno weave secondary backings, in which the one with the additional reinforcing yarns has greater delamination strength than the conventional backing without any reinforcing yarns. *See* Specification, p. 19, l. 10-p. 21, l. 25. Given the claimed invention has greater delamination strength over the prior art, the functional limitation set forth in claims 19-29 is another basis that these claims are patentable over the cited prior art.

For the final rejections, the Examiner determined that claims 36 and 43 were unpatentable because “it would have been obvious to one skilled in the art to substitute spun yarns for the *additional* tape yarns of Woodall” (Emphasis added.) Applicant respectfully disagrees that there is an additional tape yarn in Woodall. Instead, there is the normal yarn arrangement—a secondary material with substantially evenly spaced warp yarns—in which some of the yarns have different colors. *See* Woodall, Figures 4-8. Applicant respectfully submits that the Examiner’s premise of Woodall having additional yarns is incorrect and is not a proper basis to reject the claims.

Applicant thus respectfully submits that pending claims 19-44 are allowable.

CONCLUSION

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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Date: April 20, 2006

